

NWS FORM E-19 (COVER)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

REPORT ON RIVER GAGE STATION

REVISED, PRINTED DATES: 05/07/2010, 08/22/2010

LOCATION: STAMFORD
STREAM: SAPPA CREEK
BASIN: REPUBLICAN 10

HSA: GID

REFERENCES:

USGS STATION DESCRIPTION - 02/15/2002
USGS STATION DESCRIPTION - 2/9/2010
USGS STATION DESCRIPTION - RECEIVED AUGUST 2006
WATER RESOURCES DATA FOR NE - USGS
WS FORM E-19 - 03/05/1991

ABBREVIATIONS:

BM - bench mark	EPA - Environmental Protection Agency
DS - downstream	IBWC - International Boundary and Water Comm.
US - upstream	MSRC - Mississippi River Commission
HW - high water	MORC - Missouri River Commission
LW - low water	NOAA - National Oceanic and Atmospheric Admin.
RB - right bank	NOS - National Ocean Survey
LB - left bank	NWS - National Weather Service
MGL - mean gulf level	TVA - Tennessee Valley Authority
MLW - mean low water	USACE - U.S. Army Corps of Engineers
MSL - mean sea level	USBR - U.S. Bureau of Reclamation
MLT - mean low tide	USGS - U.S. Geological Survey
MT - mean tide	USWB - U.S. Weather Bureau
WQ - water quality	NGVD - National Geodetic Vertical Datum
RM - reference mark	NAD - North American Datum
RP - reference point	

LOCATION IDENTIFICATION: STMN1
NWS INDEX NUMBER: 25-8096-8
USGS NUMBER: 06847500

MAP OF GAGE LOCATION

LATITUDE: 40 07 06
LONGITUDE: 99 31 01

SOURCE: USGS GPS

LOCATION: SAPPA CREEK near STAMFORD, NE
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Revised, Printed Dates: 05/07/2010, 08/22/2010
NWS FORM E-19 PAGE 1: GAGE MAP

BENCHMARKS

ELEVATION OF GAGE ZERO: 1966.530 VERTICAL DATUM: NAVD88
LEVELING AGENCY AND DATE: Level CHECKBAR: 27.810
RATING AGENCY: USGS

BENCHMARK	DESCRIPTION	GAGE ZERO	DATUM
RM10	BRASS TAB ON RIGHT DOWNSTREAM WINGWALL. ELEVATION 26.00FT. LAST LEVELS OCTOBER 6 2009.	26.000	1992.530
RM11	BENCHMARK LOCATED 9 FT SOUTHWEST OF UPSTREAM WINGWALL. ELEVATION 24.366 FT LAST LEVEL RUN OCTOBER 2009.	24.370	1990.900
RM12	CONCRETE ANCHOR BOLT LOCATED ON RIGHT UPSTREAM WINGWALL NEAR CORNER OF BRIDGE. ELEVATION 26.17 FT. LAST LEVELS RUN OCTOBER 2009.	26.170	1992.700
RM13	LAG BOLT IN POWER POLE APPROXIMATELY 66 FT NORTHEAST OF LEFT DOWNSTREAM WINGWALL. ELEVATION 23.462 FT. LAST LEVELS RAN OCTOBER 2009.	23.470	1990.000

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Revised, Printed Dates: 05/07/2010, 08/22/2010
NWS FORM E-19 PAGE 2: BENCHMARKS

GAGES

DCP

TELEM

NESS ID: DDCB007C
 OWNER: USGS
 REPORT TIME: 0015
 INTERVAL: 60

TYPE OF TELEMETRY: dedicated
 OWNER: USGS
 PHONE NUMBER:
 INTERVAL:
 PAYOR/COST OF LINE: Unk / \$

GAGE TYPE	OWNER	MAINTENANCE	BEGAN	ENDED	GAGE LOCATION/REMARKS
Unk	USGS	USGS	12/19/1945	01/05/1960	USGS ESTABLISHED THE STATION WITH INSTALLATION OF STEVENS GRAPHIC WATER STAGE RECORDER AND WIRE WEIGHT.
wireweight	USGS	USGS	12/19/1945		WIRE WEIGHT GAGE IS ATTACHED TO DOWNSTREAM SIDE OF COUNTY BRIDGE.
Unk	USGS	USGS	01/05/1960		THE PRESENT STEVENS A-35 RECORDER REPLACED THE OLD RECORDER.
float	USGS	USGS	11/08/1966	10/01/2007	ADR RECORDER INSTALLED. THIS INSIDE GAGE, ALONG WITH THE A-35 GAGE, ARE DRIVEN BY A FLOAT SYSTEM.
staff	USGS	USGS	11/08/1966	10/05/2009	INSIDE REFERENCE GAGE IS THIS STAFF GAGE READING FROM 0 TO 23.7 FEET. IT IS ATTACHED TO A 2x6 INCH PLANK BOLTED TO SHOREWARD SIDE OF STILLING WELL.
bubble	USGS	USGS	01/01/1990		DATE OF SERVICE ACTUALLY UNKNOWN.

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Revised, Printed Dates: 05/07/2010, 08/22/2010
 NWS FORM E-19 PAGE 3: GAGES

HISTORY

PUBLICATION/LOCATION OF RECORDS	STARTING DATE	ENDING DATE
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WRD NE	12/19/1945	

TYPE OF GAGE	OWNER	STARTING DATE	ENDING DATE
-----	-----	-----	-----
Unk	USGS	12/19/1945	01/05/1960
wireweight	USGS	12/19/1945	
Unk	USGS	01/05/1960	
float	USGS	11/08/1966	10/01/2007
staff	USGS	11/08/1966	10/05/2009
bubble	USGS	01/01/1990	

ZERO ELEVATION	STARTING DATE
-----	-----
1981.310	12/19/1945
2001.020	10/01/2007
1966.530	10/06/2009

LOCATION: SAPPY CREEK near STAMFORD, NE
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Revised, Printed Dates: 05/07/2010, 08/22/2010
NWS FORM E-19 PAGE 4: HISTORY

CRESTS

FLOOD STAGE: 19.00 ACTION STAGE: 17.00 BANKFULL STAGE: 17.00
 FLOOD FLOW: 1920 ACTION FLOW: 1170

DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
07/19/1944	UNDEF	18.00	4760				
07/06/1946	UNDEF	11.74	968				
06/22/1947	UNDEF	20.10	7430				
06/28/1948	UNDEF	13.29	1460				
05/09/1949	UNDEF	14.45	2120				
08/08/1950	UNDEF	17.07	3300				
07/19/1951	UNDEF	17.10	4260				
07/15/1952	UNDEF	14.95	2250				
06/02/1953	UNDEF	11.35	1050				
08/18/1954	UNDEF	11.14	901				
06/19/1955	UNDEF	7.77	220				
06/19/1956	UNDEF	9.78	654				
06/17/1957	UNDEF	16.03	3060				
07/17/1958	UNDEF	11.16	1020				
07/17/1959	UNDEF	9.23	637				
03/24/1960	UNDEF	17.08	3780				
05/21/1961	UNDEF	14.25	2100				
07/02/1962	UNDEF	12.27	1430				
08/13/1963	UNDEF	15.16	2340				
06/21/1964	UNDEF	14.25	2160				
06/17/1965	UNDEF	15.34	2570				
06/24/1966	UNDEF	22.13	43400	X			RECORD FLOOD.
06/16/1967	UNDEF	16.41	3170				
08/11/1968	UNDEF	8.56	596				
09/05/1969	UNDEF	8.59	625				
06/13/1970	UNDEF	7.70	452				
04/29/1971	UNDEF	6.06	223				
08/04/1972	UNDEF	6.89	330				
07/19/1973	UNDEF	10.28	726				
06/14/1974	UNDEF	6.49	217				
06/27/1975	UNDEF	9.35	562				
04/10/1976	UNDEF	4.67	69				
09/03/1977	UNDEF	12.25	1280				
03/12/1978	UNDEF	5.76	156				
07/28/1979	UNDEF	9.18	225				
04/03/1980	UNDEF	4.57	26				
08/06/1981	UNDEF	6.15	60				
06/27/1982	UNDEF	8.71	290				
06/16/1983	UNDEF	15.88	2660				
05/20/1984	UNDEF	6.10	151				
05/14/1985	UNDEF	7.40	308				
07/11/1986	UNDEF	9.24	530				
05/06/1987	UNDEF	6.61	203				
07/19/1988	UNDEF	10.32	682				
05/21/1989	UNDEF	6.72	243				

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Revised, Printed Dates: 05/07/2010, 08/22/2010
 NWS FORM E-19 PAGE 5: CRESTS

DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
08/03/1990	UNDEF	8.44	356				
08/14/1991	UNDEF	6.22	173				
08/09/1992	UNDEF	8.63	299				
03/09/1993	UNDEF	8.50	440			X	BACKWATER FROM ICE.
07/04/1994	UNDEF	6.76	244				
05/28/1995	UNDEF	9.49	563				
07/19/1996	UNDEF	12.13	1400				
06/27/1997	UNDEF	7.94	371				
08/01/1998	UNDEF	6.30	201				
07/01/1999	UNDEF	5.81	112				
07/23/2000	UNDEF	8.39	384				
09/15/2001	UNDEF	5.86	122				
05/11/2002	UNDEF	4.97	59				
06/02/2003	UNDEF	4.45	33				
07/10/2004	UNDEF	5.26	75				
08/17/2005	UNDEF	9.12	329				Maximum peak stage and maximum peak flow for the year.
02/21/2007	UNDEF	9.23	236				Flow is from Feb 22.
05/26/2008	04:00	12.57	1369				

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Revised, Printed Dates: 05/07/2010, 08/22/2010
NWS FORM E-19 PAGE 5-2: CRESTS

LOW WATER RECORDS

DATE OF LOW WATER	STAGE (ft)	FLOW (CFS)	REMARKS
10/01/2005	0.00	0	No flow all year.

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NWS FORM E-19 PAGE 6: LOW WATER

CONDITIONS AFFECTING FLOW

MILES ABOVE MOUTH: 6.3 DRAINAGE AREA: 3840.0 POOL STAGE: 0.0

STREAM BED: COMPOSED MAINLY OF FINE SAND AND SILT.

REACH: UPSTREAM TO MOUTH OF BEAVER CREEK, DOWNSTREAM TO THE MOUTH OF REPUBLICAN RIVER.

REGULATION: NONE.

DIVERSION: WATER IS DIVERTED BY SOME PUMP IRRIGATION.

WINTER: CHANNEL SUBJECT TO FREEZING. HEAVY ICE COVER WILL FORM DURING PERIODS OF EXTREMELY COLD WEATHER. THE STAGE-DISCHARGE RELATION WILL BE AFFECTED BY BACKWATER.

TOPOGRAPHY: CHANNEL IS TRAPEZOIDAL IN SHAPE AND IS STRAIGHT FOR SEVERAL HUNDRED FEET ABOVE AND BELOW THE GAGE, HAVING BEEN DREDGED & STRAIGHTENED BY RAILROAD COMPANY. BANKS ARE FAIRLY HIGH AND STEEP WITH A HEAVY GROWTH OF BRUSH AND TREES ON UPPER PART OF THE BANKS.

REMARKS:

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NWS FORM E-19 PAGE 7: CONDITIONS

DAMAGE

STAGE	AREAS AFFECTED
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22.00	Flood waters may impact several farm outbuildings
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26.00	Several farm outbuildings and houses are threatened
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NWS FORM E-19 PAGE 8: DAMAGE

RIVER STAGE DATA

	40-	

	35-	

	30-	

26.00 - Several farm outbuildings and houses are threatened	25-	

22.00 - Flood waters may impact several farm outbuildings	-----	22.13 06/24/1966
	20-	20.10 06/22/1947

	-----	18.00 07/19/1944
	-----	17.10 07/19/1951
	-----	16.41 06/16/1967
	15-	15.88 06/16/1983
	-----	14.95 07/15/1952
	-----	13.29 06/28/1948
	-----	12.57 05/26/2008
	-----	11.74 07/06/1946
	10-	10.32 07/19/1988
	-----	9.78 06/19/1956
	-----	8.71 06/27/1982
	-----	7.94 06/27/1997
	-----	6.89 08/04/1972
	5-	5.86 09/15/2001
	-----	4.97 05/11/2002

	0-	

	-5-	

	-10-	

REACH: UPSTREAM TO MOUTH OF BEAVER CREEK, DOWNSTREAM TO THE MOUTH OF REPUBLICAN RIVER. ELEVATION ZERO: 1966.53

LOCATION: SAPPA CREEK near STAMFORD, NE
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NWS FORM E-19 PAGE 9: STAFF

CONTACTS

SQ	CONTACT/REMARKS	PHONE
1	SUZANNE LANS	308-868-2835
2	USGS NORTH PLATTE OFFICE MAINTENANCE.	308-532-5323

LOCATION: SAPPY CREEK near STAMFORD, NE
ID: STMN1 HSA: GID

Revised, Printed Dates: 05/07/2010, 08/22/2010
NWS FORM E-19 PAGE 10: CONTACTS